

MV 2 SERIES

GAS FRYER

OWNER'S MANUAL

Country of Destination
GB and IE

Model No.	Product Description	Rev.	Date	Flexible Hose Size
	MV Gas Fryers			
MV2FST30-NG	300 Fryer with Stainless Tank	1	20/05/08	¾" BSP hose
MV2FST30-LP	300 Fryer with Stainless Tank	1	20/05/08	¾" BSP hose
MV2FST30-NG-C	300 Fryer with Stainless Tank	1	20/05/08	¾" BSP hose
MV2FST30-LP-C	300 Fryer with Stainless Tank	1	20/05/08	¾" BSP hose
MV2FST45-NG	450 Fryer with Stainless Tank	1	20/05/08	¾" BSP hose
MV2FST45-LP	450 Fryer with Stainless Tank	1	20/05/08	¾" BSP hose
MV2FST45-NG-C	450 Fryer with Stainless Tank	1	20/05/08	¾" BSP hose
MV2FST45-LP-C	450 Fryer with Stainless Tank	1	20/05/08	¾" BSP hose
MV2FST60-NG	600 Fryer with Stainless Tank	1	20/05/08	¾" BSP hose
MV2FST60-LP	600 Fryer with Stainless Tank	1	20/05/08	¾" BSP hose
MV2FST60-NG-C	600 Fryer with Stainless Tank	1	20/05/08	¾" BSP hose
MV2FST60-LP-C	600 Fryer with Stainless Tank	1	20/05/08	¾" BSP hose
MV2FTT60-NG	600 Fryer Twin Tank with Stainless Tank	1	20/05/08	¾" BSP hose
MV2FTT60-LP	600 Fryer Twin Tank with Stainless Tank	1	20/05/08	¾" BSP hose
MV2FTT60-NG-C	600 Fryer Twin Tank with Stainless Tank	1	20/05/08	¾" BSP hose
MV2FTT60-LP-C	600 Fryer Twin Tank with Stainless Tank	1	20/05/08	¾" BSP hose

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INTRODUCTION

This manual contains all the required information to ensure that your new appliance is installed correctly and that you have all the information necessary to identify and order spare parts. It also contains comprehensive instructions for the user and for cleaning the appliance.

To maintain peak performance, it is recommended that the appliance be regularly serviced and that when ordering spare parts, reference be made to the appropriate list quoting the Part No. and the description therein. **THE FITTING OF A NON-STANDARD PART MAY VOID ANY GUARANTEE.**

All work carried out on this appliance during installation or servicing must be performed by a competent person and the connection of the appliance to the gas supply **MUST** be carried out by qualified personnel in accordance, where applicable, with the relevant regulations.

The siting of the appliance and the connection to the gas supply must comply with the latest GAS SAFETY (INSTALLATION & USE) REGULATIONS 2000: the requirements of the FIRE PRECAUTIONS ACT 1971; the HEALTH & SAFETY AT WORK, ETC ACT 1974, the BUILDING STANDARDS (SCOTLAND) CONSOLIDATION REGULATIONS 1971. Detailed recommendations are contained in British Standards BS5440 Part 1:2000, BS5440: Part 2:2000, BS5588: Part 0:1996, BS5588: Part 11:1997 & BS6173: 2001.

An easily accessible stopcock must be fitted in the gas supply adjacent to the appliance for use in emergency.

The details of the gas supply will be found on the Data Plate, which is located on the rear of the flue upstand/splashback panel.

Improvements

The policy of **Viscount Catering Ltd** is such that, each product is subject to continual development and may, therefore, be subsequently improved. The company reserves the right to alter the design of any appliance without prior notification and without the responsibility to update any delivered or in-service appliance and furthermore, without incurring the responsibility for altering these instructions. In such circumstances, it may be found that the appliance detailed herein differs in certain respects from the one supplied.

IT IS IMPORTANT, THEREFORE, TO QUOTE THE SERIAL No. AND THE APPLIANCE MODEL No. IN ALL COMMUNICATIONS WITH THE COMPANY.

Introduction (cont.)

Important

Before installing any item please refer to the installation instructions.

We recommend that all servicing other than routine cleaning be carried out by our authorised service agents and will accept no responsibility for work carried out by other persons.

For satisfactory operation, parts of catering equipment become hot. Suitable precautions must be taken to avoid accidental burns therefore the appliance should be positioned to minimise the possibility of accidental touching. It is the supervisors' responsibility to warn users to wear suitable protection and to follow correct operation and cleaning procedures.

For the details of your nearest Service Agent for all warranty and repair work, you should contact: –

The Service Department,

Enodis UK Food Service Group
Enodis House
5E Langley Business Centre
Station Road
Langley
Berkshire
SL3 8DS

Tel: +44 (0) 1753 485902

Fax: +44 (0) 845 301 1461

Spares can be obtained via the Spare Parts Department at the above address.

IT IS IMPORTANT, TO QUOTE THE SERIAL No. AND THE APPLIANCE MODEL No. IN ALL COMMUNICATIONS WITH THE COMPANY.

SPECIFICATION

Gas Pressures

Natural Gas	20mbar(8.0" w.g.)	15mbar(6" w.g.)
Propane Gas	37mbar(14.8" w.g.)	37mbar(14" w.g.)

Gas Connection

½" BSP Taper Male (Rp 1/2")

When connecting using a flexible hose fit a ¾" BSP hose

Heat Input (Nett)

	Natural Gas			Propane Gas		
	m ³ /hr	Btu/hr	kW	kg/hr	Btu/hr	kW
300 Fryer	1.4075	45,379	13.3	1.065	46,403	13.6
450 Fryer	2.87	92,806	27.2	1.84	80,182	23.5
600 Fryer	3.48	115,871	33.1	2.52	109,866	32.2
600 Twin Tank Fryer	3.55	114,643	33.6	2.57	112,050	32.84

Burner Injector

	Natural Gas	Propane Gas
300 Fryer	2.15mm	1.35mm
450 Fryer	3.03mm	1.84mm
600 Fryer	3.42mm	2.10mm
600 Twin Tank Fryer	2.36mm	1.50mm

Dimensions

	300 Fryer	450 Fryer
Width	300mm (11.8")	450mm (17.7")
Depth	700mm (27.5")	700mm (27.5")
Height	950mm (37.4")	950mm (37.4")
Pan Area (W x D)	230mm x 480mm	310mm x 480mm
	2 x (9" x 18.8")	(12.2" x 18.8")
Oil Capacity	17 Litres	20 Litres
	(3.8 Gallons)	(4.4 Gallons)
Weight	55 kg (121 lbs.)	70 kg (154 lbs.)
Output of raw chips/hr	22.7 kg	34 kg
	(50 lbs.)	(74 lbs.)

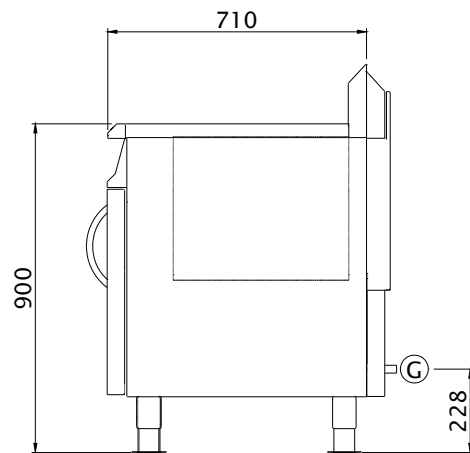
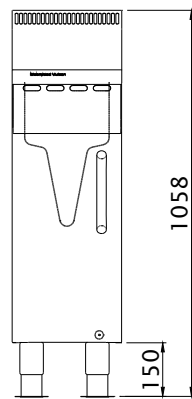
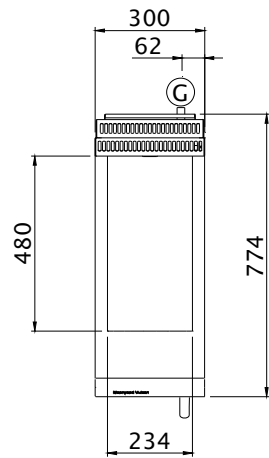
	600 Fryer	600 Twin Tank Fryer
Width	600mm (23.6")	600mm (23.6")
Depth	700mm (27.5")	700mm (27.5")
Height	950mm (37.4")	950mm (37.4")
Pan Area (W x D)	460mm x 480mm	2 x 230mm x 480mm
	(18.1" x 18.8")	2 x (9" x 18.8")
Oil Capacity	23 Litres	2 x 17 Litres
	(5.1 Gallons)	2 x (3.8 Gallons)
Weight	85 kg (187 lbs.)	85 kg (187 lbs.)
Output of raw chips/hr	45.4 kg	2 x 22.7 kg
	(100 lbs.)	2 x (50 lbs.)

Air Requirements

	Area
300 Fryer	74 cm ² (11.5 in ²)
450 Fryer	120 cm ² (18.5 in ²)
600 Fryer	150 cm ² (23.2 in ²)
600 Twin Tank Fryer	148 cm ² (23.0 in ²)

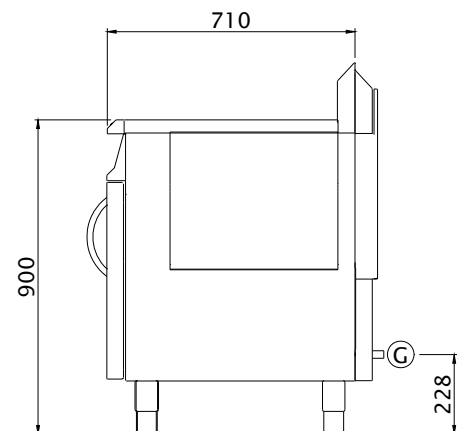
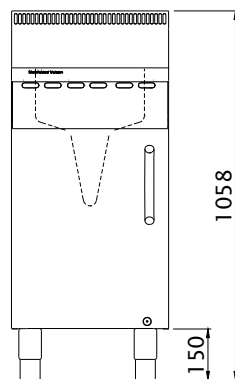
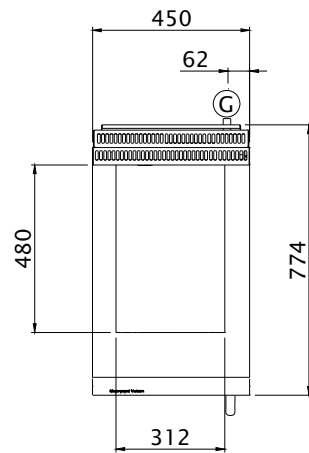
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300mm Single Tank Fryer



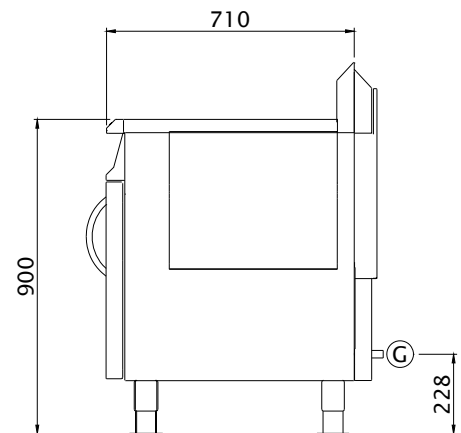
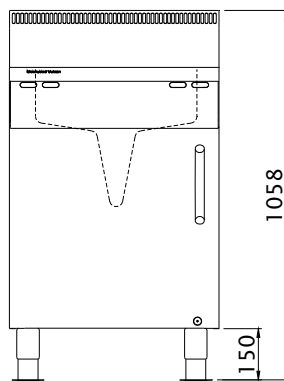
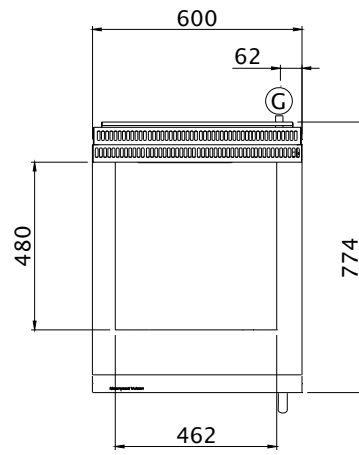
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450mm Single Tank Fryer



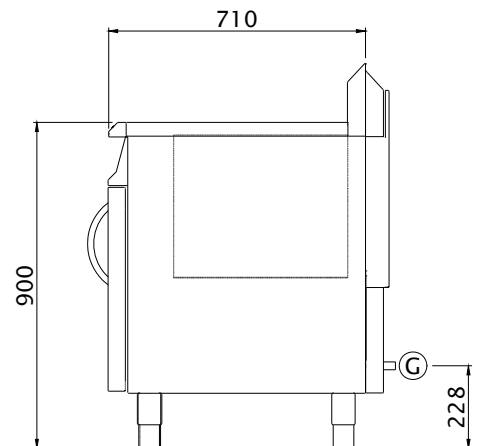
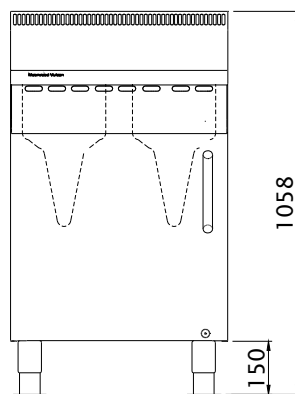
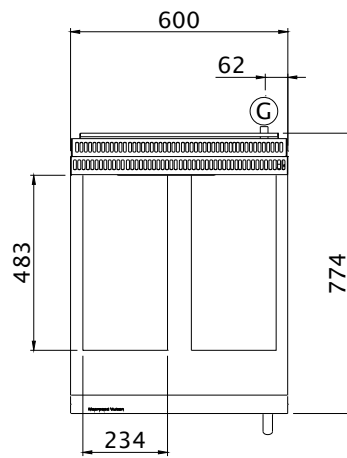
Specification (cont.)

600mm Single Tank Fryer



Specification (cont.)

600mm Twin Tank Fryer



INSTALLATION

Important

Your attention is drawn to the latest GAS SAFETY (INSTALLATION & USE) REGULATIONS 2000.

This appliance **MUST** be installed by a competent person in accordance with these and any other relevant regulations. Users, too, should be aware of the regulations governing the use of gas appliances, particularly with respect to the need for regular servicing.

Your attention is drawn to the requirement that those parts, which have been protected by the manufacturer or his agent, are not to be adjusted by the installer.

Before Installation

Before commencing installation, remove all packaging materials from the appliance. It is suggested that any protective film adhering to the stainless steel panels should be left on until installation is completed. **BUT THIS MUST BE REMOVED BEFORE COMMISSIONING OR OPERATING THE APPLIANCE.**

Check the appliance Data Plate (located on the back of the flue upstand/splashback panel), to ensure that the appliance is suitable for the gas supply available.

Ensure that the floor upon which the appliance is to stand is level and capable of adequately supporting the weight of the appliance. **TO COMPENSATE FOR SOME UNEVENNESS OF THE FLOOR, THE APPLIANCE FEET ARE ADJUSTABLE.**

THE FLOOR MUST BE FIRE PROOF. If it is not, or if any adjacent wall or surface is made of a combustible material, then the installer **MUST** ensure that the requirements of the **LOCAL FIRE REGULATIONS** are observed.

Positioning

In order for us to meet the stability requirements, this fryer **MUST BE FIXED TO THE FLOOR** by means of the fixing holes in the flanged feet. This is not necessary if the fryer is in a suite and therefore fixed to another appliance.

Place the appliance in position allowing a minimum gap of 150mm (6") at the rear and at least 150 mm (6") between the sides of the appliance and any adjacent wall. The minimum distance between the top of the appliance and any oversheaf or ceiling constructed of a combustible material must be 1525 mm (60").

Adequate ventilation is essential for safe operation of a gas appliance. A supply of fresh air is necessary for the correct combustion of the gas and there must be a means of exhausting the heat and the products of combustion from the kitchen. It is recommended that the appliance be sited below a ventilating hood, one preferably connected to an extractor system incorporating a grease filter.

Installation (cont.)

Important Note

These appliances are to be installed with sufficient ventilation to prevent the occurrence of unacceptable concentrations of substances harmful to health in the room in which they are installed.

The appliance **MUST NOT** be connected **DIRECTLY** to a flue or ventilating system, although the flue products of two or more appliances may be directed into a common outlet when building a suite of appliances (see separate instructions for suiting appliances).

Ensure that the appliance is level in two places – front to rear and side to side. To check the level it is recommended that a spirit level be placed on the top of the unit. Level can be achieved by adjusting any or all of the screw in feet in each corner of the base. Turn anti-clockwise to lower and clockwise to raise the corner. Warning if the appliance is to be free standing it should be screwed to the floor through the two front legs to ensure stability.

Gas Connection

Natural Gas: The size of the supply pipe should be no smaller than ½" BSP and an easily accessible stopcock must be fitted in the gas line adjacent to the appliance.

An armoured flexible pipe of a GAS COUNCIL APPROVED PATTERN is recommended.

NOTE:

Due to the pressure loss through the snap connection fitting on flex hoses you must fit a ¾" flexible hose to all 600mm wide Twin Basket Fryers

Ensure that all the pipes to the appliance are clean and free from swarf etc, BEFORE making the final connection.

Propane Gas: Follow the same procedure as that for Natural Gas EXCEPT that the Gas Governor **MUST BE** DISABLED using the Governor exclusion screw, – the Gas Supply Tank or Cylinders are already fitted with a Gas Regulator.

Leak Test

Clean off any protective film from the stainless steel panels.

AT THIS STAGE, LEAK TEST THE WHOLE SYSTEM. THE GAS SAFETY REGULATIONS require that ALL connections in the gas supply line between the Gas Meter and the appliance is tested for gas leaks. THIS MUST BE DONE BEFORE COMMENCING TO COMMISSION THE APPLIANCE.

Installation (cont.)

Checking and Commissioning (cont.)

ALTHOUGH EVERY APPLIANCE IS TESTED AND SET BEFORE IT LEAVES THE FACTORY, IT IS IMPORTANT THAT THE INSTALLER RE-CHECKS CERTAIN FUNCTIONS BEFORE LEAVING THE SITE.

CHECK THE GAS PRESSURE AT THE APPLIANCE THUS: –

The pressure test point is behind the compartment door on the Control Valve.

Connect a manometer (U tube) to the test point. Turn on the gas supply and light the appliance. Check that the pressure reading agrees with that stated on the Data Plate (for Twin Tank models this should be carried out separately for each tank).

SHOULD ADJUSTMENT BE NECESSARY, PROCEED AS FOLLOWS: –

On the gas governor: (part of Control Valve). Remove the cap in order to gain access to the pressure adjusting screw.

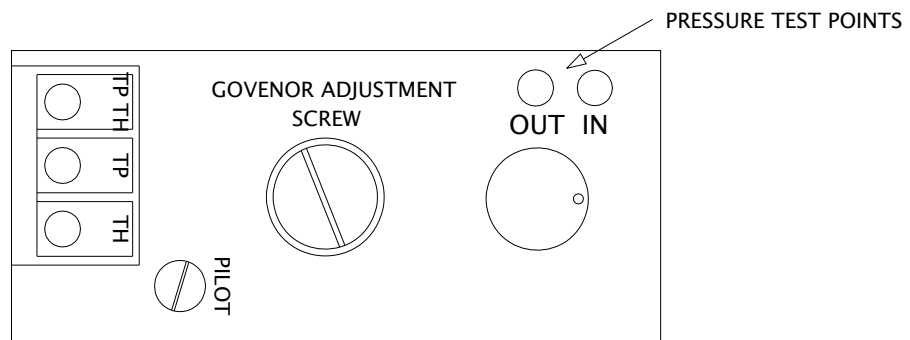
Turn the pressure adjusting screw clockwise to increase the pressure or anti-clockwise to decrease it.

When the pressure reading is correct, refit the cap to the governor.

Turn the gas supply to the unit OFF at the stopcock and disconnect the manometer (U tube). Ensure that the pressure test point screw is refitted.

Turn the gas supply to the appliance on at the stopcock and leak test the pressure test point using a leak detection fluid.

FOR PROPANE GAS, REFER TO SUPPLIER.



Burner Aeration

The aeration of all the burners is fixed and does not need adjusting.

USERS INSTRUCTIONS

Important Note!

The attention of the user is drawn to the requirements of the GAS SAFETY (INSTALLATION & USE) REGULATIONS 2000. This appliance **MUST** be used in accordance with those, particularly so in respect of the need for regular servicing.

The attention of the user is also drawn to the requirement that those parts, which have been protected by the manufacturer or his agent, are not to be adjusted by the user.

If it is necessary to remove the fryer ensure all the oil has been drained prior to moving. See also the sections of this manual referring to Cleaning and General Maintenance.

Safety Note

This appliance is intended for professional use and shall only be used by qualified personnel.

Parts and surfaces of this appliance get hot in use. It is the responsibility of the kitchen supervisor to inform and warn every user and kitchen worker of this and, furthermore, to ensure those users wear and use protective clothing when operating the appliance.

Should any adjustment or attention be necessary, you are advised to contact your nearest CORGI (Confederation for the Registration of Gas Installers) Service Engineer immediately. The need for regular servicing is detailed in the GAS SAFETY (INSTALLATION & USE) REGULATIONS 2000.

IF YOU THINK THAT GAS IS ESCAPING, ACT IMMEDIATELY. SHUT OFF THE GAS SUPPLY AT THE METER OR EMERGENCY CONTROL; CONTACT THE SUPPLIER OF YOUR GAS IMMEDIATELY.

MAKE SURE THAT ALL USERS OF THIS APPLIANCE KNOW WHERE THE GAS SUPPLY STOPCOCK IS LOCATED FOR THE USE IN AN EMERGENCY.

Improvements

The policy of **Viscount Catering Ltd** is such that each product is subject to continual improvement. The company reserves the right to alter the design of any appliance without prior notification and without the responsibility to update any delivered or in-service appliance and, furthermore, without incurring the responsibility for altering these instructions. In such circumstances, it may be found that the appliance detailed herein differs in certain respect from the one supplied.

For further details or enquires please contact:

Enodis Uk Food Service Group

Enodis House, 5E Langley Business Centre, Station Road, Langley, Berkshire, SL3 8DS

Tel: +44 (0) 1753 485900

Fax: +44 (0) 1753 485901

Users Instructions (cont.)

Lighting Instructions

WARNING: DO NOT LIGHT THE BURNERS WHEN THE PAN IS EMPTY.

- 1) Open the compartment door; ensure that the drain valve is fully closed (turn clockwise) and the locking chain is engaged. Check that the cooking oil is up to the level marked at the back of the pan.

The oil required to fill the pan to the level is:

300 Fryer	17 Litres (3.8 gallons)
450 Fryer	20 litres (4.4 gallons)
600 Fryer	23 litres (5.1 gallons)
600 Twin Tank Fryer	2 x 17 litres (3.8 gallons)

- 2) Turn on the gas supply.
- 3) Turn the thermostat knob to the OFF position.
- 4) Turn the control valve knob anti-clockwise to the Pilot position, push and hold-in, and press piezo igniter.
- 5) Hold knob depressed for a further 30 seconds to establish flame, release and check that the burner remains alight.
- 6) If the burner is extinguished on releasing knob, repeat steps 4 & 5.
- 7) Turn the control knob anti-clockwise to the ON position.
- 8) Turn the thermostat knob to the required setting to light the main burners, checking that they light before closing the door.

If the pilot goes out for any reason, turn the control valve knob to the OFF position ● and wait 3 minutes before re-lighting. This will allow the valves integral safety device to re-set. Under no circumstances should this valve knob be forced.

NOTE: – When first lighting the appliance after installation or after an extended shut-down period, it may be necessary for the control knob to remain pushed-in for some time before the burner will light, owing to the presence of air in the gas line.

To Turn Off

- 1) For short periods, turn the thermostat knob to the OFF position ●.

This will leave the pilot burner alight and the fryer ready for use.

- 2) For longer periods, (or if the fryer is to be left UNATTENDED), turn the thermostat to the OFF position ●, turn the control valve to the OFF position ●, and close external stopcock.

Users Instructions (cont.)

Use of Solidified Oil or Fat

1) In an Empty Pan.

IMPORTANT: If solidified oil or fat is to be used, remove the grid from the bottom of the pan, break the solidified oil or fat into small pieces and fill the V shaped bottom of the pan.

Light the appliance and turn the thermostat knob to 130° C. Continue to add pieces of fat into the pan until the V shaped bottom is filled with the molten fat. If the fat appears to be overheating, turn the thermostat OFF, continue to add fat and turn the thermostat ON when the fat has cooled.

Refit the grid and put the remaining pieces of oil or fat into the pan until the level is up to the mark. Allow to heat up slowly until all the fat has melted, and then turn the thermostat knob to the required cooking temperature.

2) Already Solidified In the Pan.

Light the appliance and turn the thermostat ON for approximately 5 – 10 seconds and then turn OFF again. Leave it for 30 seconds before repeating the 5 – 10 seconds cycle.

Continue to repeat until the fat has melted so that any remaining un-melted pieces are free floating, and then turn the thermostat to the required temperature.

Cooking Instructions

With the thermostat knob turned to the required cooking temperature, allow the oil or fat to heat up for about 20 minutes before starting to cook. After each load is removed from the fryer always allow 2 ½ minutes for the temperature of the oil to recover before the next load is put into the oil.

The Frying Medium

Ensure oil is always maintained at the correct level indicated and neither under or over-filled.

The attention of the user is also drawn to the risks due to replenishment of the oil when the fryer is hot.

Good quality vegetable oil is recommended.

The life expectancy of oils will be lengthened if they are filtered regularly – food particles not removed turn rancid and reduce oil quality. The life of the oil will also be extended if the temperature is turned down when the fryer is not in use.

“Please note also, using old oil will reduce the flash point and therefore present a greater fire hazard and be more prone to surge boiling. Attention shall also be drawn to the effect of over-wet food and too large a charge on surge boiling”. Hot oil is dangerous; it must not be handled until it has cooled to a safe temperature.

Users Instructions (cont.)

Cooking Instructions (cont.)

Chip Frying

The recommended load for each batch is 2 ¼ kg (5 lbs.) for each basket. This will fill the basket about 2/3 rd full and it is important that this load should not be exceeded.

Fish Frying

Cook fish by free floating them. Seven or eight 100g pieces in the 300 Fryer or 12 – 14 pieces in the 600 Fryer may be cooked at one time. Slide the fish into the pan slowly to avoid splashing of the oil or fat and to prevent the fish sinking and sticking to the base of the pan.

Cooking Chart

The following chart is for guidance only.

Maximum basket load not to exceed 2 1/4kg.

Food	Time	Temperature
Chicken Pieces	5 – 8 minutes	175° C
Chipped Potatoes (Blanched)	3 minutes	165° C
Chipped Potatoes (Browning)	1 – 2 minutes	190° C
Chipped Potatoes (Raw)	4 – 5 minutes	190° C
Doughnuts	3 – 4 minutes	170° C
Fish Fillets	5 – 7 minutes	175° C
Fritters	3 – 4 minutes	175° C
Potato Crisps	2 minutes	190° C
Scampi	3 – 4 minutes	175° C

To Obtain Best Results

Keep the pan clean.

Use good quality oil or fat, which has high breakdown temperature.

Use only clean oil or fat and strain daily.

Maintain the oil or fat at the correct level. Do not start to fry until the oil has reached the correct temperature.

Do not exceed the temperature of the oil or fat as recommended by the supplier.

Do not overload the fryer.

Remove the crumbs or pieces floating on the surface of the oil. When using frozen foods follow the food manufacturers cooking instructions carefully.

To conserve energy, turn the thermostat knob to the OFF position during breaks in frying.

Users Instructions (cont.)

Cleaning

It will be found that it takes less time and effort if appliances are cleaned every day, particularly while they are still warm and before grease and spillages are burnt on.

PROPRIETARY OVEN CLEANER MUST BE USED WITH CARE; THEY ARE HIGHLY CORROSIVE AND MAY CAUSE DAMAGE TO SURFACES AND COMPONENTS.

Clean stainless steel with soap and hot water or a mild detergent solution. Rinse and dry thoroughly.

DO NOT USE CAUSTIC OR ABRASIVE CLEANERS, DO NOT USE ABRASIVE PADS.

DO NOT USE flammable solvents and cleaning aids

NOTE! Carbon will build up as part of the natural cooking process on the inside of the Fryer tank and is not detrimental. The carbon build up can be kept to a minimum by regular cleaning and boiling with a soapy water solution.

Daily Cleaning

- 1) Turn the gas control valve to OFF.
- 2) Screw the drainpipe into the drain valve. Place a suitable container with a filter below the drain tap, remove the safety chain and open the tap.

NOTE: The oil or fat will flow more freely if it is still warm but on no account should the fat be filtered at frying temperatures.

- 3) Remove the frying basket and also the strainer from the bottom of the pan and clean these thoroughly at the sink.
- 4) Clean the inside of the pan with a clean cloth, taking care not to damage the two thermostat phials in the V section of the pan.
- 5) Refit the strainer in the bottom of the pan, close the drain tap and re-fit the safety chain.

Weekly Cleaning

- 6) Repeat stages 1 to 3 above.
- 7) Close the drain tap, fill the pan with a detergent solution and bring to boil.
- 8) Drain off the solution and wipe all surfaces clean.
- 9) If the fryer is to remain out of use for some time after cleaning with water, ensure that the pan is greased immediately after to prevent formation of rust. A coating of cooking oil is best.
- 10) If the fryer is to be re-used after cleaning, replace the strainer. Ensure the drain tap is closed, re-fit safety chain, remove the drainpipe and renew the frying medium, maintaining the correct level indicated on the back of the pan.

Users Instructions (cont.)

General Maintenance and Care

This equipment is designed and manufactured to give you long, satisfactory service at low cost, provided that it is given proper care and attention at all times. Frequent cleaning and regular checking of correct adjustments will be rewarded by reduced operating and maintenance costs, minimum downtime and regular results from your cooking.

DO NOT POKE WIRE INTO BURNER PORTS OR ORIFICES TO CLEAR THEM OF OBSTRUCTION. SEND FOR A QUALIFIED ENGINEER.

All gas taps and control knobs must operate smoothly and freely without sticking or jerking. Re-lubrication **MUST** be carried out by a **QUALIFIED ENGINEER**.

WE RECOMMEND THAT ALL EQUIPMENT IS SERVICED AT LEAST ONCE A YEAR, BUT MAY BE AS FREQUENT AS 6 MONTHS OR LESS IF THE GAS TAPS/THERMOSTAT AND GAS CONTROLS DO NOT OPERATE FREELY. ALL WORK MUST BE CARRIED OUT BY A QUALIFIED SERVICE ENGINEER.

SERVICE INTERVALS CAN BE AFFECTED BY SPILLAGE AND SHOULD BE ASSESSED EACH TIME THE EQUIPMENT HAS BEEN USED.

SERVICE AND MAINTENANCE

Maintenance MUST only be carried out by a competent person. Ensure that the gas and electricity supply to the appliance has been turned "OFF" before dismantling any components.

Routine Maintenance Procedure

- 1) Ensure that the Fryer pan is filled with oil.
- 2) Fit a manometer (U tube) to the pressure test point on the gas control valve and go through the lighting procedure. Check that the flame safety device opens from cold in no more than 10 seconds
- 3) Turn the thermostat to 150°C and check that the pressure at the test point is: –

Natural Gas – 15 mbar (6" w.g)

Propane Gas – 37 mbar (14" w.g)

Adjust if necessary the governor – on the control valve. (For Twin Tank models this should be carried out for each tank separately).

NOTE: Only leave the burners on for the minimum amount of time to ensure that the fryer does not get too hot.

- 4) Turn the thermostat to OFF and ensure that both burners extinguish completely within 3 – 4 seconds.
- 5) Turn the thermostat on again to 150°C and ensure that both burners cross light smoothly from the pilot.
- 6) Check that the burner flames are uniform and there is no spillage of the flames away from the heat exchanger.
- 7) Turn the thermostat OFF and blow out the pilot. Check that the flame safety valve closes within 60 seconds this can be done by feel or sound.
- 8) Turn off the gas, remove the pilot and withdraw the burner assembly. Clean the burner parts and ensure the injectors are clear.
- 9) Ensure that all the flue ways are clear.
- 10) Reassemble the pilot and main burners.
- 11) Go through the lighting procedure, turn the thermostat to 150°C and allow to heat up. Check that the thermostat cuts off the gas. Turn the thermostat knob to 190°C allow to heat up and note the oil temperature is 180°C when the thermostat shuts off the burners. The oil temperature will overshoot to approximately 190°C.

NOTE! Position the digital thermometer probe for thermostat testing in the centre of the fryer tank and the tip of the probe must be 25 mm (1") below the surface of the oil. Turn the thermostat off.

Service and Maintenance (cont.)

To Check Override Thermostat

During this check the temperature of the oil in the tank will reach up to 230°C and the greatest care must be taken. It is preferable that old oil is used, as the oil will not be suitable for frying after the test.

- 12) Re-heat the oil in the tank to 190°C.
- 13) With the thermostat set to 190°C, short out the thermostat (either by bridging across its contacts or by bridging across the valve contacts TP/TH & TH) the burner will re-light; allow to heat up carefully checking the oil temperature with a thermometer.

NOTE: That the over heat thermostat operates between 217°C and 223°C and that the gas to the main burners goes out immediately. ENSURE THAT THE OIL TEMPERATURE DOES NOT EXCEED 230°C INCLUSIVE OF OVER-SHOOT.

- 14) Remove the link wire from the operating thermostat.
- 15) Allow to cool and press the reset button on the overheat thermostat.
- 16) Turn on the thermostat and ensure that it operates and turns the gas to the burners on and off.
- 17) Check all gas joints for gas leaks with leak detector fluid.
- 18) Ensure there are no leaks from the drain valve and replace the old oil, after wiping out the fryer to remove any stains.

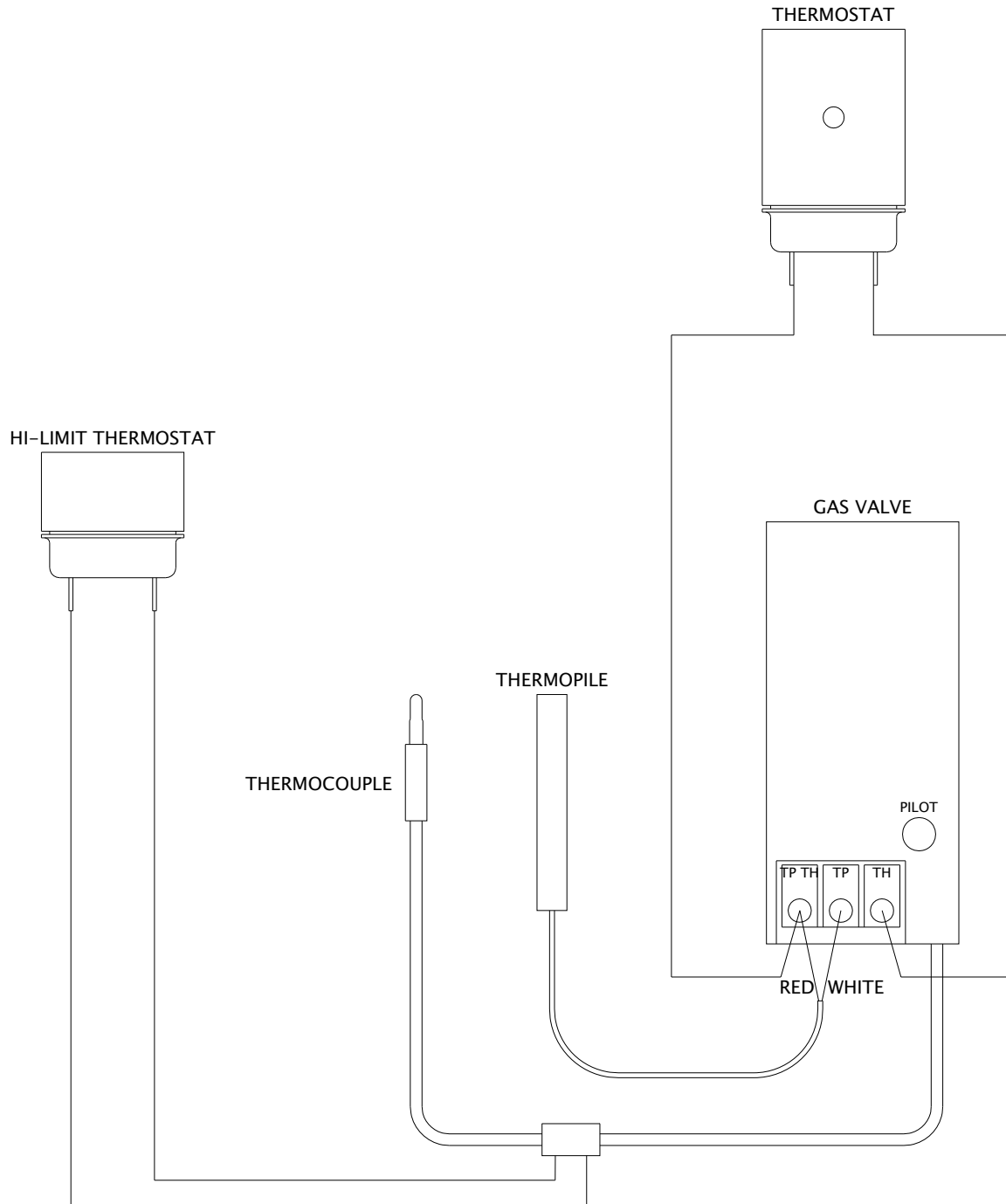
Service and Maintenance (cont.)

Fault Finding

Fault	Possible Cause	Remedy
Pilot will not establish.	High Limit Thermostat has tripped	Reset high limit thermostat. Check calibration of operating thermostat, as this may be too high causing the high limit to trip. Operating thermostat should cut off the main burners at 180°C when set to maximum temperature. If operating thermostat calibration is satisfactory, check high limit thermostat calibration as this may be set too low causing it to trip or become sensitive to vibration. High limit thermostat should cut at approx. 223°C +0 °C -12 °C. The oil temperature must not overshoot above 230°C.
	Faulty High Limit Thermostat (open circuit)	Replace
	Faulty thermocouple (low milli-voltage).	Replace.
	Faulty wiring or connections between Thermocouple and High Limit Thermostat. (no continuity)	Check wires and connections. Repair/replace as required.
	Thermocouple tip not correctly aligned with pilot flame or pilot flame too small. (low milli-voltage)	Clean or re-adjust as required
Explosive Ignition when main burners light	Pilot misalign with main burners (poor cross lighting)	Check and adjust as required to ensure satisfactory cross lighting.
	Pilot flame too small (poor cross lighting)	Check clean/ re-adjust to ensure satisfactory cross lighting.
	Gas pressure too low	Investigate cause and correct.
Pilot establishes but main burners will not light.	Is gas valve turned to on position?	Rotate knob to on position.
	Thermopile failure	Check milli-voltage Open circuit 300MV plus Closed circuit 100MV plus
	Pilot flame too small or not burning correctly(low milli-voltage from T/pile	Check/adjust or replace pilot assembly as required.
	Thermostat failure contacts open or thermostat worn or damaged	Replace Thermostat
	Wiring fault or loose connection in thermostat or thermopile circuits.	Check/ repair or replace as required.
Main Burners remain on	If main burners can not be turned on and off with the thermostat control knob. Then suspect a failed capillary tube.	Replace Thermostat
	If main burners can not be turned on and off with control thermostat knob. Suspect an open circuit connection.	Repair

Service and Maintenance (cont.)

Wiring Diagram



Service and Maintenance (cont.)

ENSURE THAT THE GAS SUPPLY TO THE APPLIANCE HAS BEEN TURNED OFF BEFORE REMOVING OR DISMANTLING ANY GAS CONTROLS.

1) Removing the Thermostat

Drain the fryer of any oil.

Open the compartment door and remove the thermostat knob.

Undo the thermostat phial gland nut from the tank and withdraw the phial/bulb.

Undo the two screws fastening the thermostat to the fixing bracket

Disconnect the two wires (noting their positions) and the thermostat can now be removed.

Replace the thermostat by reversing the above procedure.

ENSURE THAT THE THERMOSTAT PHIAL IS NOT KINKED – HAS NO SHARP BENDS AND IS CORRECTLY LOCATED IN ITS HOLDER.

2) Removing the Override Thermostat

Drain the fryer of any oil.

On Twin Tank Units, remove the fascia panel (secured by two screws) to gain access to override thermostat.

Open the compartment door and undo the phial gland nut from the tank and withdraw the phial/bulb.

Lift off the control valve cover and remove the cap and nut securing the override thermostat to its bracket and withdraw.

Disconnect the two wires (noting their positions)

Replace the thermostat by reversing the above procedure.

ENSURE THAT THE THERMOSTAT PHIAL IS NOT KINKED – HAS NO SHARP BENDS AND IS CORRECTLY LOCATED IN ITS HOLDER.

3) Removing the Burner/Pilot Assembly

Open compartment door and lift off the control valve cover.

Remove the burner heat shield, (secured by four screws) together with the override thermostat.

Undo the coupling to the burner manifold and remove the two fixing screws.

Disconnect the pilot feed pipe from the control valve.

Disconnect the two thermopile wires (noting their positions) at the control valve.

Undo the nut securing the thermocouple to the control valve.

Undo the nut (beneath the burner) securing the burner to the burner bracket. The burner can now be withdrawn from the fryer together with the pilot assembly.

Replace by reversing the above procedure.

Service and Maintenance (cont.)

4) Removing the Control Valve

Open compartment door, lift off the bottom heat shield and remove the burner heat shield secured by four screws.

Disconnect the burner feed pipe coupling and the pilot pipe coupling at the control valve.

Undo the nut securing the thermocouple to the control valve.

Disconnect the four wires to the valve (noting their positions).

Undo the union coupling from the inlet pipe to the control valve. Remove the two screws from beneath the fryer securing the valve bracket to the base panel. The valve together with its bracket can now be withdrawn.

Replace by reversing the above procedure.

5) To Remove or clean a Burner Injector

Open compartment door and lift off the control valve cover.

Remove the burner heat shield, (secured by four screws) together with the override thermostat.

Undo the coupling to the burner manifold and remove the two fixing screws securing the Manifold to the tank.

The injectors can now be unscrewed from the manifold assembly.

To clean the injector, brush off with a stiff bristle brush any dirt, blow through the orifice to remove any blockage or restriction – DO NOT POKE WIRE THROUGH THE INJECTOR ORIFICE.

Replace by reversing the above procedure.

6) Removing a Thermocouple

Open compartment door and lift off the control valve cover.

Remove the burner heat shield, (secured by four screws) together with the override thermostat.

Undo the nut securing the thermocouple to the control valve.

Undo the nut securing the thermocouple to the pilot bracket.

Replace by reversing the above procedure.

7) To Convert NG Appliances to LP

Remove the pilot assembly as described in Section 6 and fit replacement injector 931767-13.

Remove the manifold assembly as described in Section 3 to gain access to the injectors. Fit replacement injectors: –

300 Fryer	1.35mm	XO2911
450 Fryer	1.84mm	931767-19
600 Fryer	2.10 mm	931767-21
600 Twin Tank	1.50mm	931767-17
Pilot injector	.35 mm	931767-13

Unscrew governor cap screw and remove adjusting screw and spring, replace with governor exclusion screw (931767-14) and re-fit cap screw.

Finally fit replacement Data Plate and re-test the appliance.

Service and Maintenance (cont.)

8) To Convert LP appliances to NG

Proceed as described above but substitute with parts listed below

300 Fryer

Pilot injector	931767-12	x1
Burner injector	915776-08	x1

450 Fryer

Pilot injector –	931767-12	x1
Burner Injector –	931767-18	x2

600 Fryer

Pilot injector –	931767-12	x1
Burner Injector –	931767-20	x2

600 Twin Tank Fryer

Pilot Injector –	931767-12	x2
Burner Injector –	931767-16	x4

Unscrew governor exclusion screw and remove, fit governor spring and screw adjust to give 15 mb refit governor cap screw

Finally fit replacement Data Plate and re-test the appliance.

SPARE PARTS LIST

Part Number	Description	Quantity
930875-09	Control Knob	1 or 2
915776-08	Injector NG - 2.15mm(300)	2
X02911	Injector LP - 1.35mm.....(300)	2
931767-16	Injector - NG - 2.36 mm (600 Twin Tank)	4
931767-17	Injector - LP - 1.50 mm (600 Twin Tank)	4
931767-18	Injector - NG - 3.03 mm (450)	2
931767-19	Injector - LP - 1.84 mm (450)	2
931767-20	Injector - NG - 3.42mm (600)	2
931767-21	Injector - LP - 2.10mm (600)	2
931767-23	Pilot Burner	1 or 2
931767-12	Pilot Injector NG (Marked 51)	1 or 2
931767-13	Pilot Injector LP (Marked 35)	1 or 2
930656-01	Burner (300) &(600 Twin Tank)	2 or 4
930656-02	Burner (450/600)	2
931774-02	Thermostat	1 or 2
931767-01	Control Valve - NG	1 or 2
931767-14	Governor Exclusion Screw	1
931767-03	Thermopile c/w 600mm Lead	1 or 2
931767-04	Thermocouple c/w Interrupter	1 or 2
932405-01	Override Thermostat (CDR - RDC 700)	1 or 2
929344-02	Piezo Unit 300	1
931767-06	Piezo Unit 450,600,600 Twin Tank	1 or 2
931767-09	Electrode c/w nut	1 or 2
930389-01	Ignition Lead	1 or 2
932308-01	Arch Handle	1
932659-01	Door Magnet	1
920522-G1	Drain Extension Tube	1
924116-G1	Fryer Basket (300, 600 & 600 Twin Tank)	1 or 2
924116-G3	Fryer Basket (450 mm)	2
920429-G1	Strainer & Guard Assembly	1
927590-G1	Tank Cover Assembly (Aluminium - 600)	1
927590-G2	Tank Cover Assembly (Aluminium -300/ 600 Twin Tank)	1 or 2
931831-G1	Tank Cover Assembly (Aluminium - 450)	1
932853-02	Leg 65mm Dia with Flanged Foot	4
932811-01	Castor Swivel Braked	2
927590-G3	Tank Cover Assembly (Stainless - 600)	Optional
927590-G4	Tank Cover Assembly (Stainless - 600 Twin Tank)	Optional
931831-G2	Tank Cover Assembly (Stainless - 450)	Optional
931980-S1	Wire Assembly for 300/450/600 Single Tank	Spares Kit
931980-S2	Wire Assembly for 600 Twin Tank	Spares Kit

Spare Parts List (Cont.)

[illegible]

Spare parts are available from: –

Enodis UK Food Service Group

Enodis House, 5E Langley Business Centre, Station Road, Langley, Berkshire, SL3 8DS

Tel: +44 (0) 1753 485906

Fax: +44 (0) 845 301 1463

WARRANTY COVER

The Company offer twelve months warranty with each new piece of equipment subject to our normal conditions of sale and will undertake responsibility for warranty subject to the additional following conditions.

Notice of the defect/damage is given within 48 hours of breakdown or in the case of damage four days from the date of despatch and the manufacturer given adequate opportunity to examine the goods in order that appropriate action can be taken.

The Company will not be obliged to repair or replace any goods if after examination the defect/damage is found to be through accident, misuse, neglect, incorrect installation or maintenance by other than approved engineers, or any other cause beyond the reasonable control of the manufacturer.

EXCLUSIONS TO WARRANTY

Normal routine maintenance is not covered and the warranty specifically excludes any problems, which are related to scale caused by hard water and the cleaning of pilot jets. Also excluded from the warranty are the following consumable items.

Tap washers and springs, gaskets, oven lamps and indicating lights, door seals and any other perishable parts.

This warranty in no way prejudices your rights under common law and is offered as an addition to your statutory rights.